

Name: _____

Date: _____

Weekend Word Problems: Exponential Growth/Decay

1. You currently have five followers on Twitter, but the number of your followers is growing by a factor of three weekly due to your hilarious tweets.

a) Write the equation for this situation.

b) How many followers will you have in 0 weeks? 1 week? 2 weeks? 3 weeks?

c) Graph this situation.

2. You deposit \$42,301 into a savings account with an annual interest rate of 3.2%. If the interest rate is compounded quarterly, how much money will be in your account after four years? Use the exponential growth formula and round to the nearest cent.

3. Gorizium-231 has a half-life of seventeen days. You begin observing a 60 gram sample.

a) Write the equation for this situation.

b) How many grams of Gorizium-231 will be present after 136 days?

4. You purchase a car for \$35,210 in 2014. The value of the car depreciates 11.6% annually. What will the value of the car be in 2023? Use the exponential decay formula and round to the nearest cent.

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